3.0 CULTURAL BACKGROUND

3.1 PREHISTORIC PERIOD

The prehistory of the Delaware and the surrounding Middle Atlantic region is conventionally divided into three general periods, reflecting widespread developments in the environment as well as technological and social adaptation. Following Griffin's (1967) chronology for eastern North America, these periods are referred to as the Paleo-Indian (ca. 14,000-8000 B.C.), the Archaic (ca. 8000-1000 B.C.), and the Woodland (ca. 1000 B.C.-A.D. 1600). An alternative chronology has been proposed by Custer (1984, 1989) for the Delmarva Peninsula. Much of the existing database for Delmarva, as well as the settlement pattern models derived from that data, result from work conducted by Custer and his associates (e.g., Custer 1982; Custer and Bachman 1985; Custer and DeSantis 1985; Custer and Cunningham 1986). In the present study, the regional Delmarva chronology is used in tandem with the conventional model for comparative purposes. The Delmarva chronology defines the Paleo-Indian period as extending from 12,000-6500 B.C., and the Archaic period from 6500-3000 B.C. Two later periods are recognized: Woodland I, from 3000 B.C. to A.D. 1000; and Woodland II, from A.D. 1000 - 1600. Figure 3-1 summarizes the correspondence between the chronologies, along with their relationships to the major climatic periods discussed earlier.

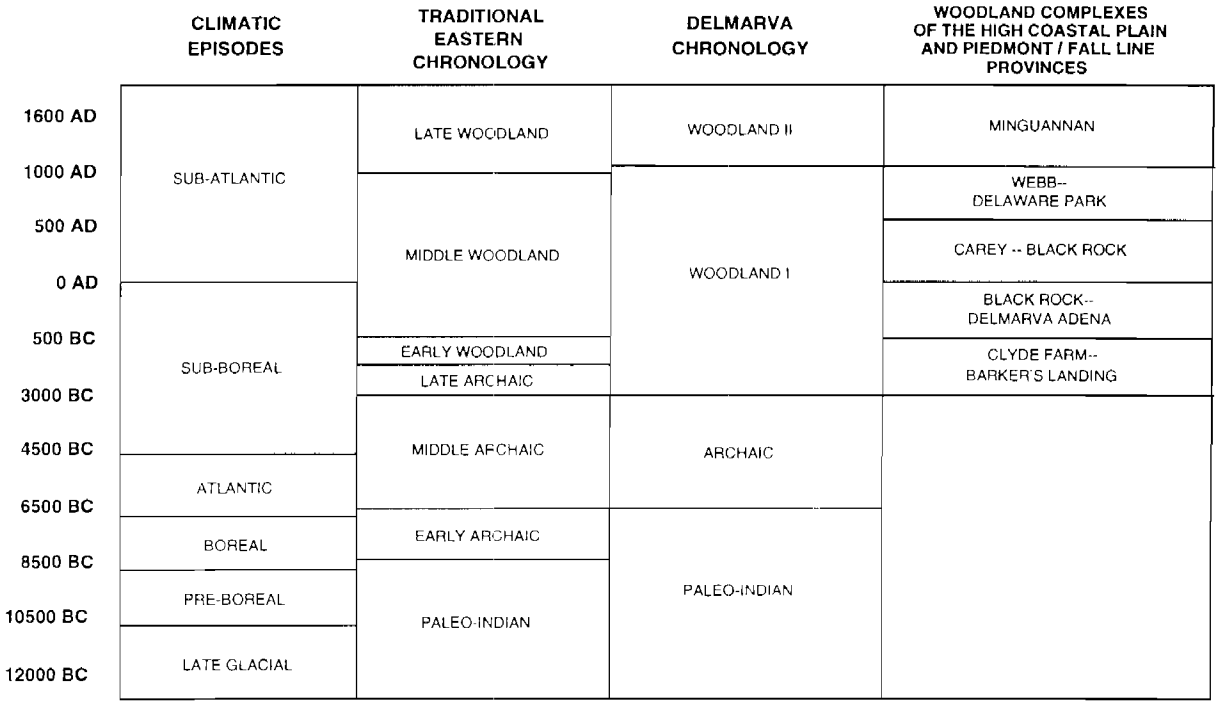

Figure 3-1. Comparison of Conventional Prehistoric Chronology, Delmarva Prehistoric Chronology, and Holocene Climatic Episodes.

3.1.1 Paleo-Indian

The record of human habitation in the Middle Atlantic begins approximately 14,000 years ago, near the end of the cool and relatively wet Late Wisconsin Glacial period. The retreat of the continental glaciers brought a fairly rapid warming trend throughout the Middle Atlantic, a phenomenon directly reflected in the replacement of northern plant and animal species by southern types. Like much of the region, Delaware was characterized by a relatively complex set of overlapping micro-environmental zones, providing a variety of subsistence resources for prehistoric populations. Big game hunting was originally assumed to be important in the subsistence economy of local populations in this period, based on analogies with big game hunting cultures in western North America. Yet the large Pleistocene grazing and browsing fauna that had earlier been present in the Middle Atlantic were for the most part gone by this point, and the woods and parklands of the region supported a wide range of flora and smaller fauna. Consequently, big game hunting, was probably not a critical part of Paleo-Indian subsistence in the region (Wesler et al. 1981; Johnson 1986; Custer 1989).

Archaeological sites dating to this period are usually identified by the presence of fluted stone projectile points, often made of high quality, cryptocrystalline lithic material such as chert or jasper. Relatively few Paleo-Indian sites have been reported throughout the Middle Atlantic. A group of fluted point finds are reported in northeastern Cecil County, Maryland, and northwestern New Castle County, Delaware (Custer and Glasso 1980; Custer et al. 1986a). Most of the Paleo-Indian locales reported in Delaware, such as the Hughes complex of sites (7K-E-10, 7K-E-24, 7K-E-33), are located in the central portion of the peninsula in southwestern Kent County (Custer 1989).

3.1.2 Archaic

The traditional Middle Atlantic chronology describes a break in cultural patterns at about 8000 B.C., approximately corresponding with a warming trend that signaled the Boreal climatic episode. The new pattern, referred to as the Archaic period, is usually recognized as ranging temporally from ca. 8000 to 1000 B.C. It was characterized by an adaptive response to the emergence of the so-called full Holocene environment, an environment increasingly like that of the present (Joyce 1988). Major sub-periods, referred to as Early, Middle and Late Archaic, are recognized within the Archaic period.

Early Archiac

Most Middle Atlantic archaeologists agree that there was some continuity of technological and cultural expression between the Paleo-Indian and the Early Archaic periods (Gardner 1974; Johnson 1986; Custer 1990). Custer (1984, 1989) has taken the further step of combining the two periods under the single rubric of Paleo-Indian. While there is evidence for an increase in the number of sites later in this extended Paleo-Indian period, high residential mobility and a varied subsistence base were typical throughout. Intensive foraging has been assumed from evidence of more transitory use of resource areas, as suggested by the presence of many small sites.

The Early Archaic period in Delmarva, from about 8000 B.C. to about 6500 B.C., was marked by the appearance of new projectile point styles. Among the cultural diagnostics of the period are the corner-notched Palmer and Kirk points; the slightly later Kirk-stemmed types; and the still later bifurcate, base points. A change is also noted in lithic raw material preference, with non-cryptocrystalline stone becoming increasingly common throughout the rest of the period.

Middle Archaic

The Middle Archaic was an undifferentiated interval of adaptation extending from ca. 6500 to 2500 B.C., corresponding roughly with the period noted in the Delmarva chronology as simply the Archaic (ca. 6500-3000 B.C.). By this time, local populations were exploiting the new floral and faunal resources that appeared with the transformation of the mixed pine-oak forest to a temperate, oak-hemlock deciduous forest. Although generalized foraging is assumed as the main resource procurement strategy, seasonally specialized, transient procurement stations have been identified, that functioned as support facilities for estuarine base camps (Gardner 1978; Custer 1986).

One of the most important environmental changes affecting prehistoric populations throughout the Middle Atlantic region during the entire Archaic period was the gradual rise in sea level accompanying the retreat of the continental ice sheets. Beginning during the Paleo-Indian period, the Holocene marine transgression, as it is often referred to, was characterized by rising sea levels and widespread lowland flooding of coastal areas. This flooding extended up many Pleistocene river valleys, including the Delaware and Susquehanna, creating the Delaware and Chesapeake bays (Stuiver and Daddario 1963). Among the effects of the inundation were marked rises in local water tables, an increase in shoreline complexity associated with estuary development, and a consequent increase in floral and faunal resources in newly formed marsh or wetland areas (Potter 1982). Large marshes and swamps became a important points of focus for settlement-subsistence during the period (Gardner 1978).

The Middle Archaic period artifact assemblage included projectile point forms such as several bifurcate types—St. Albans, LeCroy, and Kanawha (Broyles 1971)—along with stemmed types, such as Stanly or Neville. Early long- or broad-bladed forms, such as Guilford and Morrow Mountain, and the later, side-notched Halifax point, are also recognized regionally (Coe 1964). Custer (1989) contends that only the bifurcated points have sufficiently unambiguous date ranges to be chronologically diagnostic for the period in Delmarva. The lithic tool kit during this period was further marked by the appearance of groundstone tools—the first artifactual evidence of extensive plant processing. Many Coastal Plain sites in the central part of the state, such as the Snapp site (7NC-G-101) (Custer and Silber 1995), the Leipsic site (7K-C-194A) (Custer et al. 1996), or Carey Farm (7K-D-3) (Custer et al. 1995a), are reported with diagnostic artifacts from the Middle Archaic period. At most of these sites, the temporal components were mixed, and the artifacts recovered from plow zone contexts. Among the few sites with reported stratigraphic contexts from the middle part of the Archaic period is Blueberry Hill (7NC-K-107), at which Palmer and bifurcate points were recovered in levels at the base of a soil profile characterized by aeolian deposits (Heite and Blume 1995).

Late Archaic

Traditional Middle Atlantic chronologies recognize a final sub-period of the Archaic, the Late Archaic, extending from ca. 2500 to 1000 B.C. Regional environments during the Late Archaic were initially characterized by the prevalence of an oak-hickory forest. The rate of sea level rise slowed, allowing riverine and estuarine environments to form that were stable enough to support significant populations of shellfish and anadromous fish in larger streams. The focus of settlement shifted during the initial part of the period to these riverine and estuarine locales to take advantage of the increasingly predictable fish and shellfish resources (Custer 1978; Gardner 1978). In Delmarva, a pattern of warmer and drier climatic conditions during the period, referred to as the mid-postglacial xerothermic, led to the relatively rapid burial of certain landscapes through aeolian or windblown deposition. The process has been observed in association with xeric soils throughout the Low Coastal Plain and the High Coastal Plain (Curry 1980, 1992; Ward and Bachman 1987; Curry and Ebright 1989; Heite and Blume 1995).

A marked increase in site frequency has been noted during the early portions of the Late Archaic, suggesting both an overall population increase and movement into new environmental zones (Turner 1978). Some sites in the riverine and estuarine areas tend to be larger and more complex than any occupied during previous periods, suggesting a trend toward sedentism and organized resource procurement strategies (Johnson 1986). Gardner (1982) maintains that in upland areas, particularly near the fall line, large spring-and-summer base camps existed during the Late Archaic at which anadromous fish were harvested. Moreover, smaller fall-and-winter base camps were situated along inland streams, while multi-seasonal transient camps were located in a variety of environments, offering additional support to the base camp occupations. The pattern of settled occupation that developed in the Late Archaic, out of the generalized foraging pattern of the Middle Archaic, forms the basis for the segregation of the traditional periods in the Delmarva chronology: the Middle Archaic is referred to simply as the Archaic, while the Late Archaic is combined with the initial two sub-periods of the ensuing Woodland period, the Early and Middle Woodland, into a broad cultural period referred to as Woodland I (ca. 3000 B.C.-A.D. 1000), recognizing an extended interval of continuity in settlement systems.

Chipped stone artifacts characteristic of the Late Archaic period included a wide range of broad-bladed, stemmed, and notched points. Custer (1994) suggests that due to an apparent profusion of point types during the period, chronologies based on typical specimens are problematical and unreliable. In this view, point types which are considered to be useful temporal indicators include Otter Creek; broadspears such as Susquehanna, Perkiomen, Koens-Crispin, and Savannah River; and fishtails. Other points ranging from Vosburg and Brewerton, through Normanskill, Lamoka, Bare Island and Piscataway, are considered to be of relatively little use in establishing chronological trends.

Certain tool associations have been documented for the Late Archaic period throughout the region. Specific broad-bladed point types were characteristically manufactured from particular lithic raw materials: for example, Susquehanna points were often made from rhyolite, and Koens-Crispin points from argillite. Certain broadspears, such as Susquehanna,

are often found in association with bowls carved from steatite. Based on artifact associations, it has been suggested that the wide-bladed points were designed in part to exploit new riverine resources present in the Late Archaic (Witthoft 1953; Ritchie 1969).

3.1.3 Woodland

Around 1000 B.C., techniques for pottery manufacture were introduced across the region. This innovation has traditionally defined the beginning of the Woodland period in the Middle Atlantic. Ceramics, which tend to have somewhat more discretely bounded time ranges during the Woodland than do projectile points, have become the primary temporal indices.

The deliberate and organized procurement strategies that developed during the Late Archaic period appear to have remained unchanged throughout the early portions of the Woodland period. Nonetheless, there is evidence for an increase in sedentism as the inhabitants of the region became more efficient in exploiting available resources. Gardner (1982) has postulated that, rather than breaking up into small base camps in interior freshwater settings, occupants of the large spring-and-summer base camps in anadromous fishing zones regrouped in the fall and winter near the freshwater/saltwater transition to take advantage of the abundant shellfish resources there. An increasing incidence of storage features from the period at sites such as Lepisic (Custer et al. 1996), Clyde Farm (7NC-E-6A) (Custer et al. 1986b), or Pollack (7K-C-203) (Custer et al. 1995a), is widely assumed to represent archaeological evidence of the apparent trend in more organized subsistence rounds and more sedentary settlement patterns.

Early Woodland

The earliest known ceramic in the area, used from about 1200 to 800 B.C., is a steatite-tempered variety referred to as Marcey Creek ware, after its type site on the Potomac River, in Arlington County, Virginia (Manson 1948). A subsequent diagnostic ceramic type of the period is the crushed hornblende or gneiss-tempered Dames Quarter ware, for which a date of 1005 B.C. has been recorded at Clyde Farm (Artusy 1976). A series of five pit features containing Marcey Creek and Dames Quarter ceramics were dated between 980 B.C. and 1070 B.C. at the Blackbird Creek site (7NC-J-195D) (Parsons 2000). Custer (1989) notes that the predominant projectile points accompanying these ceramic wares in Delmarva are long, stemmed points, referred to as Bare Island/Lackawaxen, and various broadspears and fishtails. An additional ceramic type that occurs less frequently in Delmarva is Accokeek, a sand and grit-tempered, cord-marked ceramic, with an accepted date range of 700 to 400 B.C. (Stephenson and Ferguson 1963; Custer 1989).

In terms of broad chronological patterning, Custer further subdivides the latter part of Delmarva prehistory into a series of regional complexes, that he has described as "set[s] of archaeological sites showing similar adaptations to the bio-social environments with limited spatial and temporal distributions" (Custer 1989:36). These complexes, and their relationships within the Delmarva and to conventional chronologies, are shown in Figure 3-2, beginning with the Late Archaic (the initial Woodland I). Dames Quarter ceramics and the stemmed, broadspear and fishtail points described above comprise part of a cultural complex designated as Barker's Landing in the High or Upper Coastal Plain as well as in the Low

Coastal Plain. A distinctive form of residential patterning has been proposed as a hallmark development during the Woodland I, originally as part of the Clyde Farm Complex (Custer 1994). Evidence of features characterized as pit houses has been reported in association with Woodland I period occupations at sites including Snapp (7NC-G-101), Leipsic (7K-C-194A), Pollack (7K-C-203), and the Carey Farm (7K-D-3) and Island Farm (7K-C-13) sites.

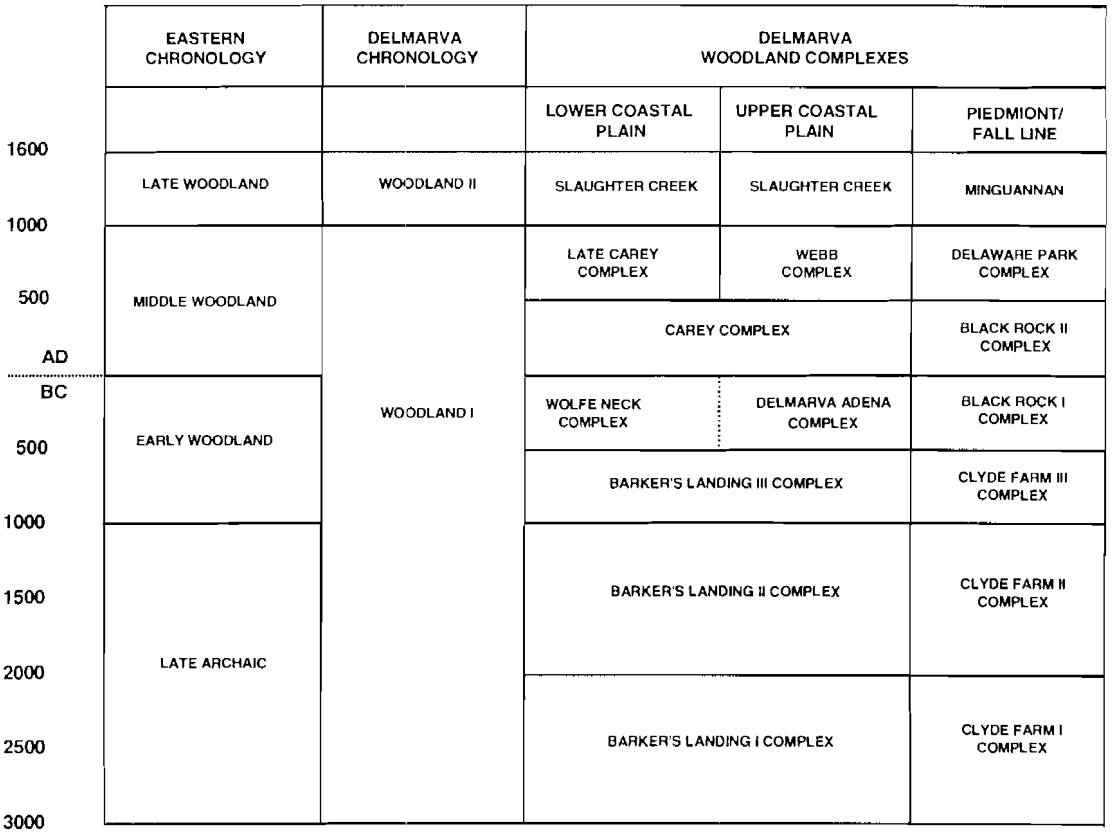

Figure 3-2. Woodland Period Regional Complexes in Delmarva.

The latter half of the Early Woodland in Delmarva is characterized by the Delmarva Adena Complex, in the High Coastal Plain, particularly in the watersheds of the St. Jones and Murderkill rivers. This complex is typified by Adena notched points, and a series of clay-tempered ceramic wares, with type names such as Coulbourn, Nassawango, and Wilgus (Custer 1989). Among the most important Adena sites reported in Delmarva are the Wilgus site (7S-K-21) (Artusy 1978); the Nassawango site (18WO23) (Bastian in Custer 1989); the St. Jones site (7K-D-1) (Thomas 1976); and the Killens Pond (7K-E-3) and the Frederica (7K-F-2) sites. Most of these sites contain numerous burials, caches of late stage bifaces of Flint Ridge (Ohio) chert, beads, pipes, and other characteristic grave goods. Recently investigated sites from this period with little or no evidence of burials are Carey Farm (7K-D-3), Puncheon Run (7K-C-51) (Liebeknecht et al. 1997), and Hickory Bluff (Petraglia et al. 2002).

Throughout the rest of the peninsula, a relatively thick ceramic ware, known as Wolfe Neck, appears to have been contemporary with Delmarva Adena, and provides the name for the associated cultural complex, the Wolfe Neck Complex, in the Low Coastal Plain and in the Piedmont/Fall Line regions. Wolfe Neck vessels were tempered with crushed quartz and had cord-marked or net-impressed exteriors. Radiocarbon dates for Wolfe Neck range from 505 B.C., at the type site at Wolfe Neck Farm (7S-D-10), to 380 B.C., at Dill Farm (7K-E-12) (Griffith and Artusy 1977; Griffith 1982). While no specific projectile point types have been documented in association with these ceramics, a series of small stemmed points made on locally available pebble materials frequently occur on sites with occupations from the early part of the Woodland period, particularly on the Coastal Plain (LeeDecker et al. 2001; Petraglia et al. 2002).

There is some evidence for changes in regional settlement patterns during the final stages of the Early Woodland period, with semi-sedentary base camps, often referred to as macro-band base camps, increasing in size (Custer 1989, 1994). Studies indicate a shift in the locations of these base camps from small creek floodplains to large river floodplains. This proposed shift may have set the stage for the local development, or adoption, of horticulture (Snyder and Gardner 1979; Gardner 1982). On the Delmarva Coastal Plain, Custer (1986, 1994) notes a shift in base camp locations from confluence areas of freshwater streams and estuaries to locations farther upstream. Increased participation in trade and exchange networks is also noted, as is an assumed increase in societal complexity. Both processes are inferred from the appearance of exotic lithic raw materials as well as artifacts and burial ceremonialism associated with cultures from the Mississippi and Ohio River Valleys, particularly in the Delmarva Adena, as noted above (Custer 1989).

Middle Woodland

The break between Early and Middle Woodland periods is usually placed sometime after the beginning of the Christian era (A.D. 0). It is roughly correlated with the appearance of a new ceramic tempering agent—shell—first seen in Delmarva in a thick-walled, shell-tempered, often cord-marked or net-impressed ceramic ware known as Mockley. The date range for Mockley in Delmarva is approximately A.D. 110 to 450 (Artusy 1976). However, most Mockley sites cluster between A.D. 200 and 330, including at Carey Farm (7K-D-3), the Wilgus site (7S-K-21), the Hughes-Willis site (7K-D-21), the Wolfe Neck site (7S-D-10), and 18KE17, on the Eastern Shore of the Chesapeake in Kent County, Maryland (Custer 1989). Lithic projectile points associated with the period include lanceolate and stemmed Fox Creek or Selby Bay, corner-notched or pentagonal Jack's Reef, and shouldered and contracting stemmed Rossville (Steponaitis 1980; Wanser 1982). A preference for argillite and rhyolite in the manufacture of certain lithic tools, particularly Fox Creek or Selby Bay points, is also noted during the period (Custer 1986; Curry and Kavanagh 1989). Custer (1989) notes the presence of Mockley ceramics and Fox Creek points as hallmarks of the Carey Complex (A.D. 0–600), which is recognized virtually throughout the physiographic zones of Delmarva. The beginning of the Carey Complex is marked by the retreat of Adena influence on the peninsula, including the abandonment of mortuary centers. Continuity is noted with the preceding Wolfe Neck Complex in terms of settlement and regional exchange patterns.

Other complexes are recognized in the Middle Woodland in Delmarva, including the Webb Complex, in the High Coastal Plain, and the Delaware Park Complex, to the north, in the Piedmont/Fall Line. The Webb Complex was identified at the Island Field site (7K-F-17) (Thomas and Warren 1970; Custer et al. 1990). Diagnostic artifacts include Hell Island ceramics, a crushed quartz-tempered and fabric- or cord-impressed ware with a date range of approximately A.D. 600—1000. Associated lithics consisted of Jack's Reef pentagonal, Rossville, and a generalized side-notched point. In addition, burials and evidence of mortuary ceremonialism suggest the re-emergence of contact with extra-regional groups: a radiocarbon date of A.D. 740 was returned from a cremated burial at the site (Thomas and Warren 1970). Among other Webb Complex sites are the Hell Island site (7NC-F-7) and the Taylor Cedar Creek site (7S-C-17), the latter with a date of A.D. 645 (Artusy 1976). A change in settlement patterns occurs during the Webb Complex. Few Webb Complex macro-band base camps are known, and large macro-band base camps are presumed to have reached a threshold size during preceding periods, eventually fissioning into smaller base camps (Custer 1989).

Attributes of the Delaware Park Complex, the late Middle Woodland manifestation in the Piedmont/Fall Line, are described mainly through excavations at the Delaware Park site (7NC-E-41), where a number of large and small storage pits from the period were documented. Radiocarbon dates of A.D. 605 and A.D. 640 were obtained from two of the pit features (Thomas 1981). Associated with the features were Hell Island ceramics, Jack's Reef pentagonal, Rossville points, and a generalized side-notched point. A similar combination of Hell Island ceramics and Jack's Reef points was recorded at Clyde Farm (7NC-E-6) (Custer 1989). In comparison with the contemporary Webb Complex, relatively low levels of exchange have been inferred from a general absence of exotic artifacts.

Late Woodland

By approximately A.D. 900, horticulture began to achieve a significant role in the total subsistence system throughout much of the Middle Atlantic. Direct evidence of cultivation is rare and scattered on the Middle Atlantic Coastal Plain and has yet to be recorded on the Delaware Coastal Plain (Custer and Cunningham 1986). Evidence is abundant, though, of a pattern of focused collecting on a scale with earlier Woodland subsistence systems; therefore, horticulture is presumed to have remained a secondary activity (Custer 1989). Continually increasing sedentism is assumed on the basis of storage facilities and house structures that occur on sites from the period, particularly in the southern part of the peninsula. The disappearance of exotic lithics and non-local influences on mortuary practices, along with a marked period of cultural stability, as evidenced in ceramic wares throughout the period, imply an apparent breakdown of the extensive trade and exchange networks operating during the earlier portions of the Woodland period (Stewart et al. 1986). These changes were distinct across Delmarva, and they represent a cultural break defined as the Late Woodland period, which extended from A.D. 1000 to 1600. The latter date represents the approximate date of European Contact. The Late Woodland period corresponds roughly with the Woodland II period in the alternative Delmarva chronology (Custer 1989).

Two regional Late Woodland complexes are recognized in Delmarva, distinguished by characteristic ceramic wares and certain variations in settlement pattern. In the Piedmont/Fall

Line and High Coastal Plain zones, the Minguannan Complex is marked by a ceramic ware of the same name, which is characterized by sand, grit, or crushed quartz temper, and smoothed or cord-marked exteriors (Custer 1985). Minguannan ware is often decorated with incised or corded designs, which are occasionally found together in a variety referred to as Minguannan Compound Decorated (Custer 1985). Associated projectile point forms appear restricted to triangular points. Little evidence of widespread sedentism has been discovered at Minguannan Complex sites—there are no large villages, nor has a marked shift to fertile bottomlands been documented.

The second Late Woodland cultural complex, Slaughter Creek, occurs mostly in coastal areas of the Low Coastal Plain. Settlement was characterized by large macro-band base camps and villages, particularly south of the Mispillion River, at sites such as Mispillion (7S-A-1), Slaughter Creek (7S-G-30), and Townsend (7S-G-2). Diagnostic artifacts of the complex include the thin-walled, shell-tempered, and fabric-impressed Townsend ceramics (Blaker 1950; Griffith 1977). Both simple and complex decoration occurs on Townsend ware, applied either with incised lines or cording. As with the Minguannan Complex, associated lithics are restricted to several triangular projectile point types.

3.2 HISTORICAL PERIOD

Most of Kent County, outside of the main population centers in Dover, Smyrna, Milford, and Harrington, is rural. The history of the county reflects its agricultural base. Historical periodization follows the main topics developed in the *Management Plan for Delaware's Historical Archaeological Resources* (DeCunzo and Catts 1990).

3.2.1 Exploration and Frontier Settlement (1630 to 1730)

Early Swedish, Dutch, and English immigrants across the state of Delaware were farmers, principally growing tobacco, rye, and barley. By the end of the seventeenth century, wheat had become an important crop, signaling a shift from a subsistence-oriented economy to market-oriented agriculture. Lumbering was also an important industry, for both regional shipbuilding and export, and it continued throughout the seventeenth and eighteenth centuries (Crowther 1973). Increased deforestation had the further effect of higher crop yields for Delaware's farmers and surpluses supported burgeoning towns (Herman and Siders 1989).

3.2.2 Intensified and Durable Occupation (1730 to 1770)

By the mid-eighteenth century, towns and industry grew in the northern parts of the state, stimulated by commercial expansion and an increasing population (DeCunzo and Catts 1990). Kent County farms were worked during the eighteenth century by white indentured servants and enslaved African Americans. The focus of agricultural production shifted during this period from tobacco to grain crops.

3.2.3 Transformation from Colony to State (1770 to 1830)

Continued intensive farming without effective crop rotation or fertilization may have led to soil depletion. The farming of marginal lands and a downturn in the price of wheat resulted in hardship for many agriculturists and the trend towards tenant farming increased considerably during the period (Herman and Siders 1989; DeCunzo and Catts 1990). The development of new sources of income in industrial and urban areas partly offset agricultural declines in the early part of the nineteenth century. During this time, road networks were expanded or upgraded and turnpike companies were chartered. In 1829, the Chesapeake and Delaware Canal was opened, providing a more rapid means of crossing the peninsula (Wise 1983). The growth of railroads significantly influenced the course of Delaware's economic development, providing access to important urban markets to the west and north, and resulting in changes in agriculture and industry, and in the emergence of new towns.

3.2.4 Industrialization and Capitalization (1830 to 1880)

This period witnessed an agricultural revival fueled in part by improved farming methods. Large deposits of marl, a natural fertilizer, were uncovered during the excavation of the Chesapeake and Delaware Canal in the 1820s. Gouverneur Emerson, a Philadelphia physician, experimented with scientific farming on farms he owned in central Delaware. He experimented with crop rotation and the use of fertilizer, and is credited with the introduction of guano as a fertilizer in Delaware. The Kent County Agricultural Society, which encouraged the use of improved drainage, fertilizer, and farm machinery, was founded in 1835 (United States Department of Energy [USDOE] 1996; Thomas and Payne 1996).

Following their introduction during the 1830s, peaches supplanted wheat in importance, particularly in New Castle County, which had better access to urban markets than areas of the state further to the south. The peach industry expanded to Kent County with the introduction of rail lines in the 1850s. With the correspondingly improved market access, the county was, for a short while in the 1870s, the center of the peach industry in the state (Hancock 1976). Nevertheless, grain, vegetables, poultry and livestock continued to be the primary agricultural products.

Following the agricultural depression of the 1820s, many farms had been bought up by large landowners. These landowners then leased their land to tenant farmers. The prevalence of tenant farming increased across the state throughout the nineteenth century. By 1900, more than half of all farmers in Delaware were tenants or sharecroppers. Farmers of the lower peninsula of Delaware have been characterized as being more self-sufficient than those in the northern part of the state, the latter being more heavily influenced by the proximity of large markets in Philadelphia and Baltimore. At mid-century, home manufacture was still an important source of income for Kent County farmers (USDOE 1996; Thomas and Payne 1996).

By the late 1860s, with the publishing of the Beers *Atlas of the State of Delaware* (Beers 1868), land ownership of the area around the Bridge 2-210A project area was identified (Figure 3-3). The land north of the area was owned by J. Richard (west of Route 210) and Dr.

G. Saulbury (east of Route 210) (Figure 3-3: Plate 45). P. Rowley owned land south of the project area in 1868 (Figure 3-3: Plate 53).

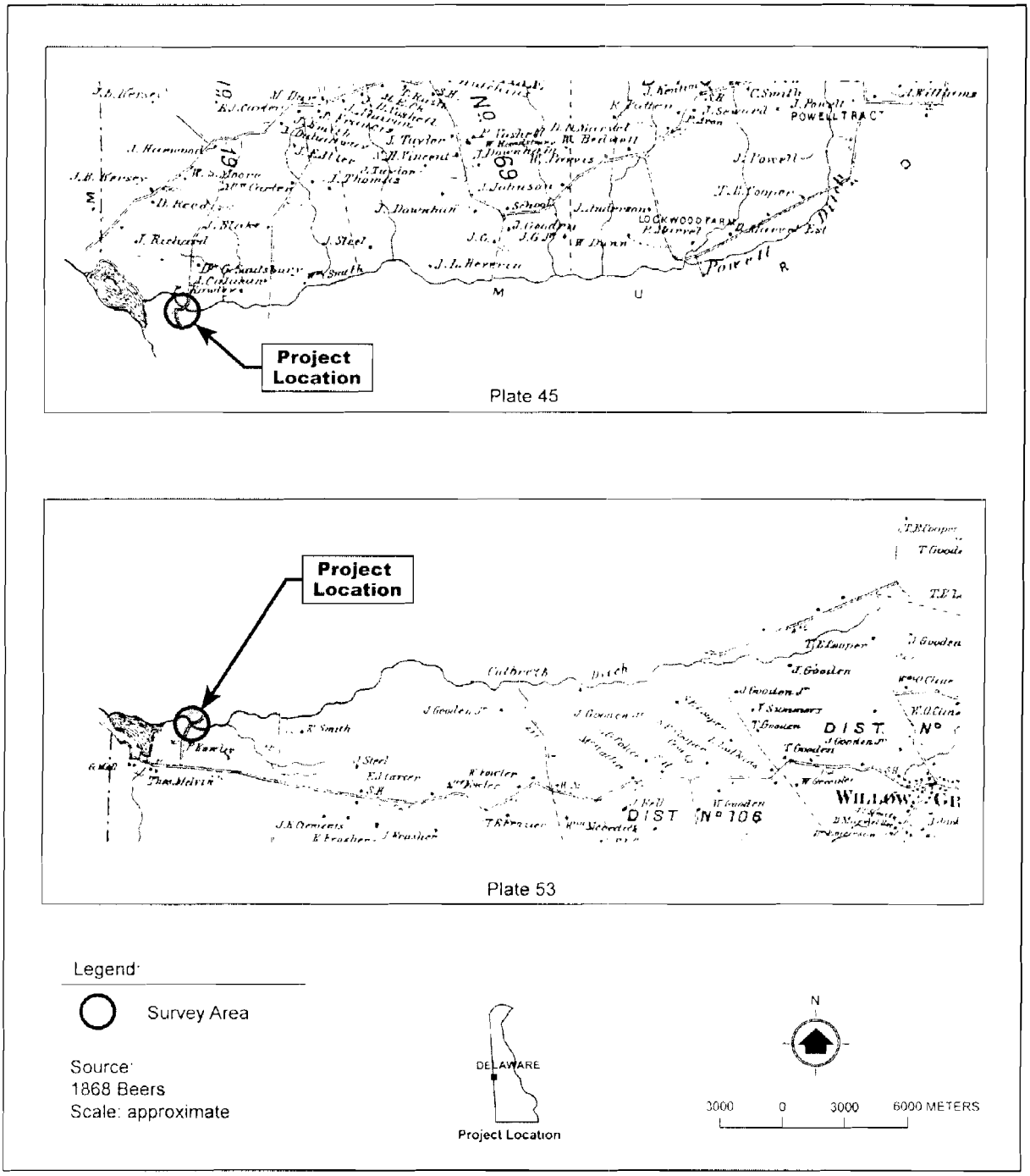

Figure 3-3. Bridge 2-210A Project Area in 1868.

3.2.5 Urbanization and Suburbanization (1880 to 1940)

Between 1870 and 1900, there was a decrease in the percentage of the population of the state that were engaged in agriculture and an increase in the number of people engaged in industry and manufacturing (DeCunzo and Catts 1990; De Cunzo and Garcia 1992). Nonetheless, agriculture remained the economic mainstay of Kent County, although farm size in the county declined. Farmers diversified their crops, shifting from staples to perishable produce, such as tomatoes, apples, potatoes, strawberries, and other fruits and vegetables, in response to market demands in the eastern United States (U.S.). Tenant farming also increased in frequency at this time. With the ongoing improvement of internal transportation and inter-regional road systems, such as the main north-south Dupont Highway (Route 13), completed in 1923, the importance of small crossroads communities decreased (USDOE 1996; Thomas and Payne 1996).

Examination of maps from the early part of the twentieth century indicates the development of the roads and stream drainages associated with the Bridge 2-210A project area. Culbreth Marsh Ditch is first depicted in the Beers *Atlas*, in 1868, identified as both Culbreth Ditch (Figure 3-3: Plate 45) and Powell Ditch (Figure 3-3: Plate 53), flowing westward into what is now known as Mud Millpond, at the Maryland state line (Figure 3-3). A U.S. Postal Rural Delivery Service map, dated 1911, shows the ditch as a natural stream, Tanner Branch, (United States Postal Service [USPS] 1911) (Figure 3-4). By 1956, the stream is labeled Culbreth Marsh Ditch, and is shown flowing into the mill pond in a southwesterly direction (United States Geological Survey [USGS] 1956) (Figure 3-5).

There is some ambiguity in terms of the orientation of Shady Bridge Road in the project area between 1911 and 1956. The former intersection with Mud Mill Road, where Shady Bridge Road begins, is shown on the 1911 Postal Service map slightly to the east of its present location (Figure 3-4). On that map, the road is shown north of this intersection, with a sharp turn to the east and a second sharp turn to the northwest, before crossing Tanner Branch on a northwest-southeast orientation. North of Tanner Branch, the road turned toward the north-northwest, and is shown to the west of its present route for the remainder of its length. By 1956, the road is shown with a less pronounced S-curve and crosses the stream on an east-west orientation after the first bend. The most current USGS map refers to the road as Sandy Bridge Road (USGS 1993).

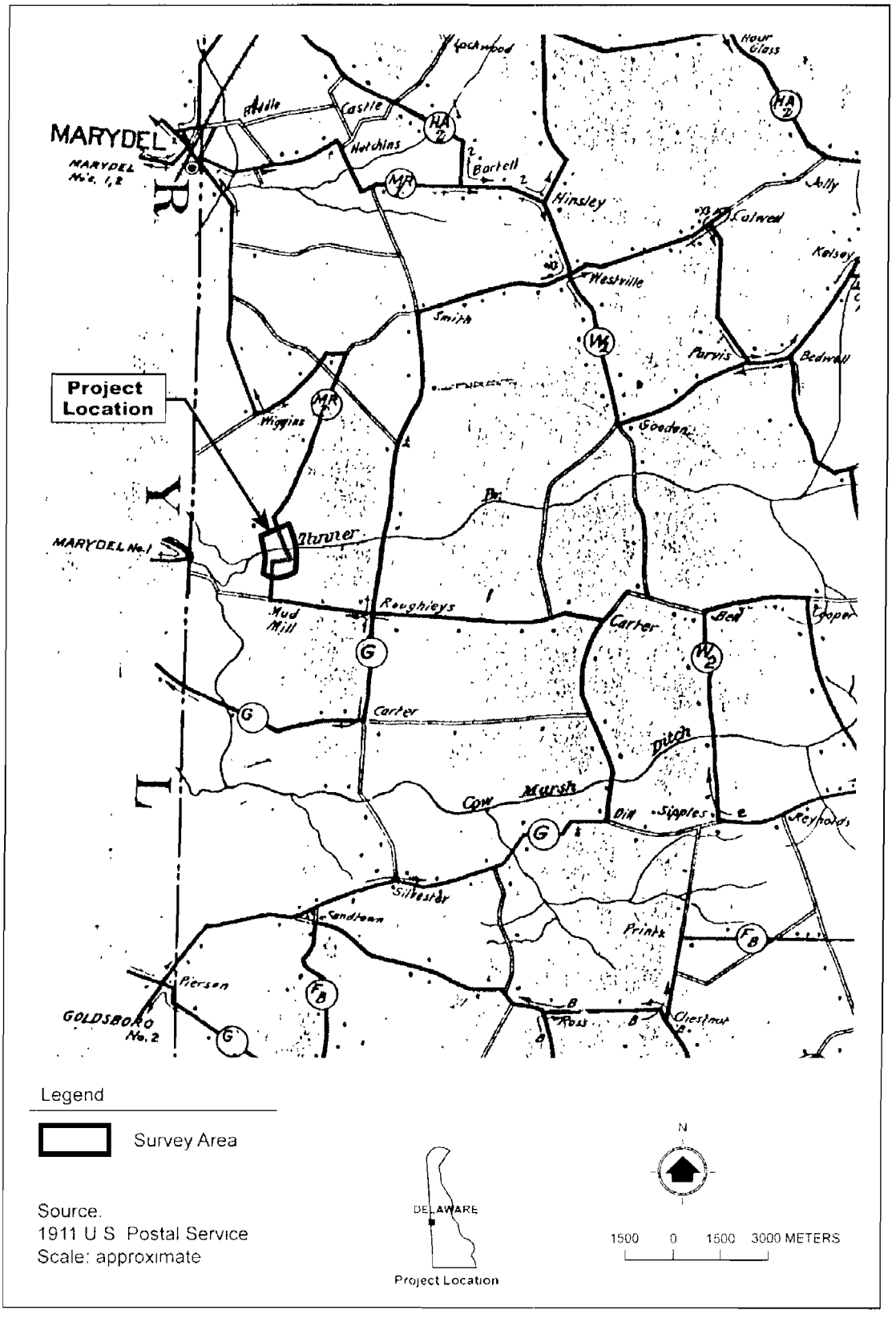

Figure 3-4. Bridge 2-210A Project Area in 1911.

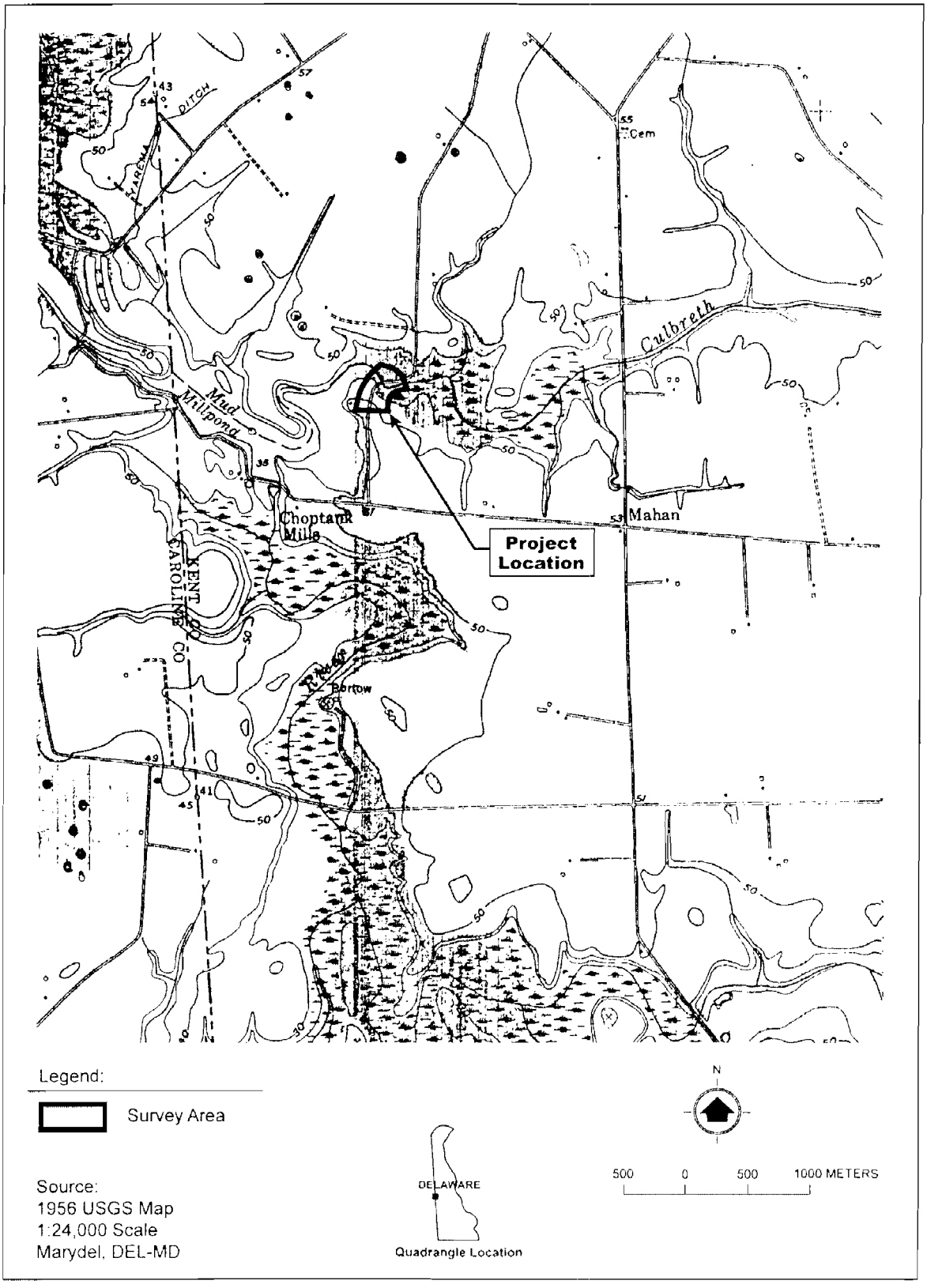

Figure 3-5. Bridge 2-210A Project Area in 1956.